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EXAMINER

GORMAN, DARREN W

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,151

Applicant(s)

WARD ET AL.

Examiner

Darren W. Gorman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,10-19,21-32,38-47,49,51 and 56-66 is/are pending in the application.
- 4a) Of the above claim(s) 56-65 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-47,49,51 and 66 is/are allowed.
- 6) ☒ Claim(s) 1-5,7,10-19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claim 38 is allowable. The restriction requirement between species Groups I, II and III, as set forth in the Office action mailed on December 8, 2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 40, 41 and 45, directed to species Groups II and III, are no longer withdrawn from consideration because the claims require all the limitations of an allowable claim. However, claims 56-65, directed to non-elected species remain withdrawn from consideration because they do not require all the limitations of an allowable claim. **It is noted that withdrawn claims 56 and 57 depend from cancelled claim 55.**

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitations, “the conveyor assembly” and “the container” lack antecedent basis. Further, the recitation, “a pre-wetting system for selectively dispensing liquid onto material being transported by the conveyor assembly” is unclear. Claim 28 only includes liquid storage and liquid dispensing, so it is unclear what “material” is being “pre-wetted”. The Examiner notes that this rejection would be overcome by amending claim 30 to depend from claim 29.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 5, 13-16, 21-24 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Doherty et al., USPN 6,173,904.

Regarding claim 1, Doherty shows a vehicle (40) (see Figures 1 and 2) comprising: a chassis (no reference number); and a storage and dispensing apparatus (42) disposed upon the chassis, comprising: a hopper (48) for storing granular material (44); a conveyor assembly (50)

for selectively transporting the material from the hopper, at least a portion of the conveyor assembly being disposed within the hopper; a liquid storage system (54) for storing liquid; and a liquid dispensing system (56) for selectively dispensing the liquid from the liquid storage system. As to the storage and dispensing apparatus including the limitations recited on lines 9-18 of claim 1 (which had previously been recited in original claims 6, 8 and 9), Doherty shows and discloses the liquid storage system defining a liquid containment vessel (54), which “may essentially be bifurcated and positioned along the length of the vehicle on the outer sides of the granular hopper” (see column 4, lines 59-62). It should be noted that, although Figure 2 of Doherty does not clearly show each of the structural limitations recited on lines 9-18 of claim 1, the arrangement of the liquid vessel as described in column 4, lines 59-62 of Doherty would inherently meet all of these limitations.

As to claims 2 and 4, Doherty further shows a body (no reference number) mounted to the chassis, the body having front and rear ends and first and second side walls, the body being disposed between the chassis and the storage and dispensing apparatus, the storage and dispensing apparatus being disposed within the first and second side walls of the body (see Figures 1 and 2).

As to claim 5, Doherty shows a portion of the rear end of the storage and dispensing apparatus extending beyond the rear end of the body (see Figure 1).

As to claims 13-16, 21 and 22, Doherty shows the liquid dispensing system having a pre-wetting system (no reference number, second spray bar shown in Figure 2; see column 3, lines 5-8), and an anti-icing system (56), wherein each system includes a plurality of nozzles (see Figure 2). Further, Doherty shows the hopper including a discharge chute (52), wherein the pre-wetting

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system includes nozzles disposed in the discharge chute (see again Figure 2; and column 3, lines 5-8). It should be noted that, although Figure 2 of Doherty does not clearly show that the pre-wetting nozzles are in fact within the discharge chute, Doherty's disclosure that the granular material is pre-wetted "prior to the granular material being dispensed", in combination with what is shown in the view of Figure 2, inherently disposes the pre-wetting nozzles in the discharge chute.

As to claim 23, although Doherty does not expressly disclose a "plumbing cabinet" housing at least a portion of the liquid dispensing system, such is inherent within the vehicle of Doherty because the liquid dispensing system of Doherty inherently includes a piping system, valves, pumps, etc., and inherently at least one of these elements, if not all of these elements of the liquid dispensing system is housed within an enclosure of some sort, thereby anticipating the claim.

As to claim 24, Doherty discloses that the spray bar position/orientation may be controlled locally or remotely (see column 5, lines 6-8). Doherty also discloses that a series of valves such as solenoid valves may be remotely operated, and that the width of the spray from each nozzle can be controlled by either the operator or by automated control (see column 5, lines 33-38).

Regarding claims 28-32, Doherty shows a vehicle (40) (see Figures 1 and 2) comprising: a chassis (no reference number); and a storage and dispensing apparatus (42) disposed upon the chassis, the storage and dispensing apparatus including a liquid storage system (54) for storing liquid, a liquid dispensing system (56) for selectively dispensing the liquid from the liquid storage system, a container (48) for storing granular material (44), and a conveyor assembly (50)

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for selectively dispensing the granular material from the container. Doherty further discloses a control system (including on board computer 216), which monitors several parameters and controls the liquid dispensing system depending on the condition of the parameters (see column 16, lines 10-45). As to the limitation, “wherein the liquid dispensing system includes a plurality of movable nozzles”, Doherty expressly discloses that the position of liquid spray bar (56), which includes a plurality of nozzles (64), may be “locally or remotely variable so that it may extend at any angle from the truck, to create any number of orientations” (see column 5, lines 6-8). As to the limitation, “the control system independently adjusting the nozzles in response to the condition of the at least one parameter”, Doherty expressly discloses that the liquid flow rate and proportion to the nozzles is controlled and adjusted in response to at least one parameter (such as the spread pattern of granular material), and that the nozzles themselves may also be adjustable to provide even finer control of the liquid material spread width in response to sensed conditions of the at least one parameter (see column 12, line 52 through column 13, line 6). Again, the Examiner notes that Doherty discloses that the width of the spray from each nozzle can be controlled by either the operator or by automated control (see again, column 5, lines 33-38). It should also be noted that Doherty further expressly teaches placing a variety of sensors on the vehicle “in order to tailor application of materials more exactly to local conditions and requirements” (see column 16, lines 46-56). Further, Doherty discloses spray bar (56) as being an anti-icing system, which selectively dispenses liquid from the vehicle, and Doherty also discloses another series of nozzles (no reference number) for pre-wetting the granular material prior to being dispensed from the container (see column 3, lines 5-8).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904.

Doherty shows all of the recited elements of claim 16, however Doherty does not expressly disclose the anti-icing system including a pair of nozzle assemblies. Doherty does expressly disclose that spray bar (56) of the anti-icing system “may also be formed by a vertical stack of smaller spray bars and nozzles” (see column 5, lines 1-3). In such an arrangement as disclosed by Doherty, the “vertical stack of smaller spray bars” would reasonably read on a single nozzle assembly having at least an upper pair of nozzles, lower pair of nozzles, and intermediate pair of nozzles, the nozzle assembly depending from the storage and dispensing apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the nozzle assembly disclosed by Doherty, such that a pair of nozzle assemblies depend from the storage and dispensing apparatus of Doherty, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

8. Claims 3, 7 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kime, USPN 6,446,879.

Doherty shows all of the recited elements of claims 1 and 2, however, Doherty does not expressly teach the body being pivotally mounted to the chassis, nor does Doherty expressly teach the conveyor assembly comprising a pair of augers. Further, Doherty does not expressly teach the storage and dispensing apparatus including a clean-out passage connected to the liquid dispensing system.

Kime shows a road treatment vehicle (10) (see Figures 1-6), comprising a body pivotally mounted to the vehicle chassis (see Figure 2), the body including a hopper (270) for storing solid granular material and at least one liquid storage tank (308, 310), and a conveyor assembly disposed within the hopper comprising a pair of augers (76, 78) in substantially parallel, spaced relationship to each other (see Figure 5). Further, Kime shows a plurality of clean-out passages (322-328) connected to the at least one liquid storage tank (see Figure 6; and column 11, lines 24-26).

As to claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have pivotally mounted the body of Doherty, as taught by Kime, in order to further facilitate conveying of the granular material within the hopper body by using gravity.

As to claim 7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conveyor assembly of Doherty to include a pair of augers in parallel spaced arrangement, as taught by Kime, in order to provide a more reliable material conveying system that is capable of conveying a larger quantity of material.

As to claim 25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include at least one clean-out passage, as taught by Kime, connected to the liquid storage tank of Doherty, in order to facilitate cleaning out and draining of the liquid storage tank.

9. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kime, USPN 6,068,200.

Doherty shows all of the recited elements of claim 1, however Doherty is silent as to including a plurality of “braces” having a plurality of holes disposed within the liquid containment vessel.

Kime shows a vehicle having a liquid storage tank (370) (see Figure 4) including a plurality of baffle-type braces (386-388, 390, 422-425), each brace having a plurality of holes (see Figure 5A; and column 12, lines 52-58), wherein the braces improve structural integrity for the tank, while preventing the “slosh phenomena”, which may occur with sudden stops of the vehicle (see Figure 4; and column 14, lines 2-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include perforated baffle-type braces, as taught by Kime, in the liquid storage tank of Doherty, such that the tank has improved structural integrity and such that the “slosh phenomena” is prevented during sudden stops of the vehicle.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Wise et al., USPN 5,186,396.

Doherty shows all of the recited elements of claim 1, however Doherty is silent as to including a liquid agitation system.

Wise shows a road treatment vehicle (10) (see Figures 1 and 5), which dispenses granular and liquid material, including a liquid storage system having a flow control valve (42), which either permits liquid flow to a series of nozzles (21) or recirculates the liquid back to a liquid storage tank (16). It is well known in the art that recirculating liquids within a liquid storage and dispensing system inherently agitates and mixes liquid.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid storage and dispensing system of Doherty, to recirculate the stored liquid, as taught by Wise, in order to agitate the liquid such that suspended particles within the liquid are kept uniformly mixed within the solution.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Kubacak et al., USPN 4,315,602.

Regarding claim 19, Doherty shows, or renders obvious, all of the recited elements of claim 18, however, Doherty does not expressly teach each nozzle being rotatable.

Kubacak shows spray bar assembly for a vehicle including nozzle pairs, each nozzle (52) being mounted on a swivel (54) such that the nozzles may be adjusted depending on the desired spray pattern (see Figure 2; and column 4, lines 26-32).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the nozzles of Doherty to be rotatable, as taught by Kubacak, such that the nozzles can be adjusted depending on the desired spray pattern.

12. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al., USPN 6,173,904, in view of Ungerer et al., USPN 6,123,276.

Doherty shows all of the recited elements of claim 1, however Doherty does not expressly teach the hopper including a plurality of grate screens covering the hopper opening, nor does Doherty teach an “interlock system” associated with the grate screens.

Ungerer shows a vehicle having a granular material hopper, wherein the hopper opening is covered by a plurality of grate screens which permit loading of granular material through the screens while preventing personnel from entering the hopper, the grate screens including an interlock system which selectively prevents the grate screens from being opened and reduces the possibility of inadvertent activation of an auger within the hopper while the grate screens are open (see Figures 1-6; and column 1, line 23 through column 2, line 44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include grate screens and an interlock system, as taught by Ungerer, with the vehicle shown by Doherty, in order to permit loading of granular material while preventing personnel from entering the hopper and to selectively prevent the grate screens from being opened in order to improve safety of personnel using the vehicle.

Allowable Subject Matter

13. Claims 38-47, 49, 51 and 66 are allowed.

Response to Arguments

14. Applicant's arguments filed on page 12, paragraph 4, of the "Remarks" section of the response filed October 18, 2006, with respect to the Doherty reference (US Patent No. 6,173,904) as failing to teach or suggest a vehicle combination as recited in amended claim 1, have been fully considered but they are not persuasive. Applicant specifically states that Doherty fails to teach or suggest a storage and dispensing apparatus having a liquid containment vessel with a connecting section disposed between the first and second side sections and between the bottom and the base.

As disclosed in column 4, lines 59-62 of Doherty, "the liquid storage vessel 54 may essentially be bifurcated and positioned along the length of the vehicle on the outer sides of the granular hopper". Since the liquid storage vessel is disclosed by Doherty, in the alternative, as being "bifurcated" (i.e. a single tank divided into two parts), then inherently there must be a connecting section disposed between the first and second side sections and between the bottom and the base, such that the liquid stored therein is in fluid communication between the two halves of the bifurcated tank. It should also be noted that a connecting section between the two halves must exist, since emptying one half of the tank without allowing the liquid volumes of the two halves to equalize would lead to the vehicle being dangerously off-balance.

15. Applicant's arguments filed on page 12, paragraph 5, of the "Remarks" section of the response filed October 18, 2006, with respect to the Doherty reference (US Patent No. 6,173,904) as failing to teach or suggest a vehicle combination as recited in amended claim 28,

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have been fully considered but they are not persuasive. Applicant specifically states that Doherty fails to teach or suggest a vehicle having a liquid dispensing system having a plurality of movable nozzles and a control system that independently adjusts the nozzles in response to the condition of at least one parameter. Applicant also states, in contrast, that Doherty provides a “spray bar 56”.

As discussed above under paragraph 5 of this office action, with respect to the limitations of claim 28, although the Examiner concurs that Doherty “provides a spray bar”, Doherty expressly discloses that the position of the liquid spray bar (56), which includes a plurality of nozzles (64), may be “locally or remotely variable so that it may extend at any angle from the truck, to create any number of orientations” (see column 5, lines 6-8). In other words, Doherty expressly teaches a “plurality of movable nozzles”. Further, as discussed above, Doherty discloses a control system (including on board computer 216), which monitors several parameters and controls the liquid dispensing system depending on the condition of the parameters (see column 16, lines 10-45), and Doherty expressly discloses that the liquid flow rate and proportion to the nozzles is controlled and adjusted in response to at least one sensed parameter, and that the nozzles themselves may also be adjustable to provide even finer control of the liquid material spread width in response to sensed conditions of the at least one parameter, such as the spread pattern of granular material (see column 12, line 52 through column 13, line 6). In other words, Doherty expressly teaches “a control system that independently adjusts the nozzles in response to the condition of at least one parameter”.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.

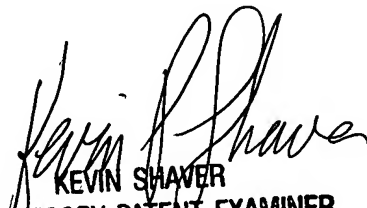
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DWG
November 1, 2006

Darren W Gorman
Examiner
Art Unit 3752


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SUPERVISORY PATENT EXAMINER
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